

METHOD AND APPARATUS FOR VENOUS DRAINAGE AND RETROGRADE CORONARY PERfusion

5

Abstract of the Disclosure

A system is disclosed for cannulating the vena cava of a patient during cardiopulmonary bypass procedures. Such cannulation is necessary for drainage of venous blood from the patient so that it may be oxygenated and 10 pumped back to the patient to perfuse tissues during cardiac surgery and, more specifically, during periods of ischemic cardiac arrest or dysfunction. The device of the present invention not only provides venous drainage for cardiopulmonary bypass, but also performs the function of routing cardioplegic solution through the heart in the retrograde direction. Such cardioplegia provides protection to the 15 heart during periods of ischemic cardiac arrest. This invention replaces a plurality of cannulae currently used for open-heart surgery, thus simplifying the surgical field and improving visibility of the heart. The device allows for the delivery of retrograde cardioplegia to the coronary circulation of both the right and the left side of the heart. The device further includes protection mechanisms 20 to prevent overinflation or excessive pressurization of the right atrium during retrograde delivery of cardioplegia solution.